

Inspection Report with SI&A Data

Structure Description: 804.13 Foot - 4 Span Steel continuous Stringer/Multi-beam or Girder

2 District: 06 **3 County:** Campbell **16 Latitude:** 39°04'53.00" **7 Longitude:** 84°29'30.00"

7 Facility Carried: CS-1204

Milepoint: 0.080

6A Feature Intersected: CSX RAILROAD

9 Location: 200' EAST JCT KY 9

NBI	X
Element	X
Fracture Critical	
Underwater	
Special	

NBI CONDITION RATINGS			
58 Deck:	7	61 Channel:	N
59 Superstructure:	7	62 Culvert:	N
60 Substructure:	7	Sufficiency Rating:	86.6

GEOMETRIC DATA		
48 Max Length Span:		132.874 ft
49 Structure Length:		804.134 ft
32 Approach Roadway:		25.919 ft
33 Median:		(0) No Median
34 Skew:		7°
35 Flare:		No Flare
50A Curb/Sidewalk Width L:		1.499 ft
50B Curb/Sidewalk Width R:		6.001 ft
47 Horiz. Clearance:		25.919 ft
51 Width Curb to Curb:		25.919 ft
52 Width Out to Out:		33.793 ft

DESIGN	
Substandard:	No
Fracture Critical:	No FC Details
43A Main Span Material:	(4) Steel Continuous
43B Main Span Design:	(02) Stringer / Girder
45 Number of Spans Main:	4
44A Approach Span Material:	(5) Prestressed Concrete
44B Approach Span Design:	Not Coded
46 Number of Approach Spans:	5
107 Deck Type:	(1) Concrete-Cast-in-Place
108A Wearing Surface:	(1) Monolithic Concrete
108B Membrane:	(0) None
108C Deck Protection:	(1) Epoxy Coated Reinforcing
Overlay Y/N:	No
Overlay Type:	None
Overlay Thickness:	-1.000 in
Overlay Date:	

ADMINISTRATIVE		
27 Year Built:		1989
106 Year Reconstructed:		0
42A Type of Service On:		(1) Highway
42B Type of Service Under:		(2) Railroad
37 Historical Significance:		(5) Not Eligible
21 Maintenance Responsibility:		(02) County Hwy Agency
22 Owner:		(02) County Hwy Agency
101 Parallel Structure:		(N) No II Structure Exists

APPRAISAL	
36A Bridge Railings:	(1) Meets Standards
36B Transitions:	(1) Meets Standards
36C Approach Guardrail:	(1) Meets Standards
36D Approach Guardrail Ends:	(1) Meets Standards
71 Waterway Adequacy:	(N) Not Applicable
72 Approach Alignment:	(7) Above Minimum
113 Scour Critical:	(N) Not over Waterway
Recommended Scour Critical:	(N) Not over Waterway

CLEARANCES		
10 Vert. Clearance:		99.999 ft
53 Min. Vert. Clearance Over:		99.999 ft
54A Vert. Under Reference:		(R) Railroad beneath struct.
54B Min. Vert. Underclearance:		22.671 ft
55A Lateral Under Reference:		(R) Railroad beneath struct.
55B Min. Lat. Underclearance R:		16.404 ft
56 Min. Lat. Underclearance L:		0.000 ft

LOAD RATINGS	
63 Operating Type:	(1) Load Factor (LF)
64 Operating Rating:	75.0 tons
65 Inventory Type:	(1) Load Factor (LF)
66 Inventory Rating:	45.0 tons
Truck Capacity Type I:	tons
Truck Capacity Type II:	tons
Truck Capacity Type III:	tons
Truck Capacity Type IV:	tons

POSTINGS	
41 Posting Status:	(A) Open, No Restriction
Signs Posted Cardinal:	No
Signs Posted Non-Cardinal:	No
Field Postings Gross:	0 tons
Field Postings Type I:	0 tons
Field Postings Type II:	0 tons
Field Postings Type III:	0 tons
Field Postings Type IV:	0 tons

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12: Re Concrete Deck

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	27,173.81	0	0%	27,173.81	100%	0	0%	0	0%

Deck*
 Note that there are some minor surface spalls in the deck at the near the joints. Minor transverse cracking was found randomly throughout the surface of the deck.
 See Photos

7358: DO NOT USE Concrete Cracking

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	20,935.5	0	0%	20,935.5	100%	0	0%	0	0%

Deck*
 Note that there are some minor surface spalls in the deck at the near the joints. Minor transverse cracking was found randomly throughout the surface of the deck.
 See Photos

7359: DO NOT USE Concrete Efflorescenc

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	10.76	0	0%	10.76	100%	0	0%	0	0%

Deck*
 Note that there are some minor surface spalls in the deck at the near the joints. Minor transverse cracking was found randomly throughout the surface of the deck.
 See Photos

107: Steel Opn Girder/Beam

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	1,908	1,908	100%	0	0%	0	0%	0	0%

Steel Girders*
 This structure has steel girders in the rear four spans. All beams are in good condition. Note that minor paint failure was found randomly throughout the bottom flanges. The left outside beam in second span has some rusty areas under drain that runs along the outside face of bridge. The drain is leaking at a few joints and the rust areas are at these locations.
 See Photos

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515: Steel Protective Coating									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	0.3	0.3	100%	0	0%	0	0%	0	0%

109: Pre Opn Conc Girder/Beam									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	1,376	1,376	100%	0	0%	0	0%	0	0%

Concrete Girders*

This bridge has five spans of concrete beams. Over pier #6 both the right outside beams have diagonal cracks in webs starting at bottom flanges going up away from beam ends. Beam for span #7 the diagonal crack extends all the way up through the top flange to deck; stops at deck. Beam for span #6 is only approximately 6 in. long and is only in the web. Over pier #5 the right outside beam for span #5 has a long vertical crack in web starting at bottom flange going all the way up through the top flange to deck; stops at deck. This crack is approximately 6 in. back from the end of beam. Over pier #5 the right outside beam for span #6 has a small diagonal crack at end of beam in top flange. Over pier #8 right outside beam for span #9 has a diagonal crack starting at end of beam at center of web going up through the top flange to deck; stops at deck. Both right outside beams over pier #8 has minor surface cracking & delamination to outside face of bottom flanges at beam ends.

205: Re Conc Column									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	18	18	100%	0	0%	0	0%	0	0%

Pier Columns*

Pier columns were found to be performing as designed at this time.

210: Re Conc Pier Wall									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	26	26	100%	0	0%	0	0%	0	0%

Pier Walls*

Piers along railroads have walls on the inside face of columns to protect them from trains. Walls have minor small areas of undermining which remain watched for worsening conditions.

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215: Re Conc Abutment

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	84	84	100%	0	0%	0	0%	0	0%

Abutments*

Both are in good condition. Someone built a small fire next to forward which blackened the abutment, girders, and deck soffit but appears not to have been hot enough to do any damage. Both have a lot of graffiti. Rear backwall has a few vertical cracks in the face. On top the backwall next to sidewalk has a 1 ft. surface spall.
See Photos

234: Re Conc Pier Cap

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	253.5	253.5	100%	0	0%	0	0%	0	0%

Pier Caps*

Concrete cap at pier #5 the rear face over the left column has a vertical crack extending down from the top approximately 2 ft. long.

300: Strip Seal Exp Joint

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	58.16	58.16	100%	0	0%	0	0%	0	0%

Strip Seal Joints*

Note that only joints # 2 and 3 are of strip seal design. Both of these seals were found to be packed with roadway dirt and debris at the time this inspection.
See Photos

302: Compressn Joint Seal

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	87.24	58.16	67%	0	0%	0	0%	29.08	33%

Compression Seal Joints*

Note that only joints # 1, 4, and 5 are compression seal joints.
Joint # 4 has failed and the expansion material has fallen down and is lying on pier below.
Note that the # 1 and 5 joint seals were found to be packed with roadway dirt and debris and that they appear to be compressed about as tightly as they can be compressed at the time of inspection at which time it was approximately 15 degrees outside.
See Photos

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310: Elastomeric Bearing

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	48	48	100%	0	0%	0	0%	0	0%

Elastomeric Bearing Pads*
 Bridge has elastomeric bearings under both the steel and concrete beams. From the ground all bearings look to be in good condition. Note that several of the pads are very high up and could not be closely seen for inspection.

321: Re Conc Approach Slab

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	10,753.15	10,753.15	100%	0	0%	0	0%	0	0%

Approach Slab*
 There is a 25 ft. long approach slab at forward which appears to be performing as designed at this time.

331: Re Conc Bridge Railing

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	1,642	1,632	99%	10	1%	0	0%	0	0%

Bridge Railing*
 Bridge has 36 in. high concrete parapets along both sides. Right parapet has a 5 ft. high wire fence along the top. the vandal protection fence along the top of the bridge railing has several end caps that have become disconnected from the top of the vertical posts. Right rear most portion of vandal protection fencing found to be missing the top portion. The inside face of left parapet has a few minor tire rubs from roadway traffic impact in the past. Vertical flexure cracking was found randomly throughout both bridge railings. Right concrete parapet has a few minor surface spalls along the top. Protective coating failure was found randomly throughout the concrete bridge railing.
 See Photos

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333: Other Bridge Railing

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	821	801	98%	20	2%	0	0%	0	0%

Metal Railing*
 Bridge has 36 in. high concrete parapets along both sides. Right parapet has a 5 ft. high wire fence along the top. the vandal protection fence along the top of the bridge railing has several end caps that have become disconnected from the top of the vertical posts. Right rear most portion of vandal protection fencing found to be missing the top portion. The inside face of left parapet has a few minor tire rubs from roadway traffic impact in the past. Vertical flexure cracking was found randomly throughout both bridge railings. Right concrete parapet has a few minor surface spalls along the top. Protective coating failure was found randomly throughout the concrete bridge railing.
 See Photos

804: Sidewalk

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(LF)	821	821	100%	0	0%	0	0%	0	0%

Sidewalk*
 Bridge has a 5 ft. wide sidewalk along the right side. Sidewalk has a few minor hairline transverse cracks. Note that the entire sidewalk could not be seen for inspection due snow covering.

850: 2nd Elem

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(EA)	1	0	0%	0	0%	1	100%	0	0%

Diaphragms*
 The concrete diaphragms were found to have random areas of delamination and spalling at the union with the beam ends. Bridge used to have a light under the deck in rear span which appears to have been disconnected/damaged. This light was fastened between the beams to a steel diaphragm.
 See Photos

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852: Drains									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(EA)	1	0	0%	0	0%	1	100%	0	0%
<p>Drains*</p> <p>There is drain pipe running along the left outside face of bridge, and in span #2 has some leakage around joints. This leakage is starting to rust the outside beam in a few spots.</p> <p>Note that the top side of the drains could not be seen for inspection due to snow covering at the time of inspection.</p>									

853: Utilities									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(EA)	1	0	0%	0	0%	1	100%	0	0%
<p>Utilities*</p> <p>Bridge has roadway lighting along both sides mounted to the top of the bridge railings. The forward light pole along the left side has the 4 1/2 in. x 2 5/8 in. cover missing exposing some wiring down next to the parapet. Bridge used to have a light under the deck in rear span which appears to have been disconnected/damaged. This light was fastened between the beams to a steel diaphragm.</p> <p>See Photos</p>									

859: Vegetation									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(EA)	1	0	0%	1	100%	0	0%	0	0%
<p>Vegetation*</p> <p>Note that vegetation growth under structure was found to be coming into contact with the bottom side of the structure and needs to be removed.</p> <p>See Photos</p>									

STRUCTURE NOTES

INSPECTION NOTES
<p>-Note that during this inspection the sidewalk and gutter lines could not be completely seen for inspection due to snow covering. (01/30/2014) GTC</p>

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WORK

Action: -1 - Converted Work Candidates

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-Make repairs to the drainage system to prevent leaking in the future.

Action: -1 - Converted Work Candidates

Generated by gcady on 01/30/2014

-Make repairs to the vandal protection fencing along the right side of the structure as needed.

Action: -1 - Converted Work Candidates

Generated by gcady on 01/30/2014

-Remove vegetation growth from under structure that is coming into contact with the structure.